PREPAREDNESS FOR PEACE

An intelligent and interesting presentation within a brief compass of the subject assigned to me, "Modern Methods of Studying the Mind," would require literary skill of such high order that with the chairman's permission we shall undertake the less ambitious task of considering a few generalizations, not technical descriptions of methods of studying the mind, of the same character as those which John Stuart Mill once described as "the common wisdom of common life"; and then try to determine whether the practical application of some of this knowledge would not to a certain degree remedy our present national unpreparedness for peace with honor.

By way of prologue let me remind you that although at least 100,000 years separate us from our Neanderthal ancestor, we have only just begun to take an intelligent interest in the mechanism of the human mind. Philosophers of antiquity as well as of the present have recorded their impressions of an idealized humanity, but the youngest of all the sciences is the study of the activities of living individuals; and the recent birth of this interest partially explains the pessimism expressed by those who have been rudely awakened by current events to an appreciation of the relatively slight progress made by civilization.

This year marks an important chapter in history. To-day the world pays a tax in blood on human ignorance. Protests are made and Heaven is implored to avert the logical consequences for our failure to obey the command "know thyself." Little did we appreciate how ignorant we are in regard to the foundations of character, and the factors that condition it. As our intelligence increases we shall gradually become quite as much ashamed of our ignorance of human nature as we are now shocked by the horrors of war. How do we intend to face the present crisis? Indulge in maudlin sentimentality, become more bitterly denunciatory, shut our eyes to the magnitude of the task and pray, or rise and acquit ourselves like men?

The problems of peace are more difficult to solve than are those of war. Intelligent belligerency represents a lower plane of mental activity than intelligent neutrality. A declaration of war is an indication of the present inadequacy of human intelligence to solve great problems. Shall we succeed or fail in our declared neutrality? In what direction shall we turn for assistance? The tax upon the brain power of the nation in preparing for peace will be greater than in preparing for war.

Is it rational to suppose that the correct answers to the great questions which now force themselves upon our attention will be given by diplomatist, statesman, social reformer, historian or any person who attempts to predict coming events merely by analyzing impressionistic records of human conduct? Should we not turn to those who are attempting to secure a comprehensive knowledge of the human brain, and its mechanism as expressed in character and conduct? "Declarations of war" and "treaties of peace" are the products of cerebral functions. As long as physicians attacked the problems of physiology from the historical point of view little progress was made in explaining the functions of individual organs; and equally futile have been the efforts of those who, ignoring the study of living individuals, go back to historical sources for their information and offer "these records of the dead" as interpretations of the synthesized activities of all the organs of the human body objectively represented in behavior or conduct. Is there any reason why we should be spared the ignominy of reaping that which

we have sown? We still look at the problems of living from a narrow historical point of view, describing its phenomena in terms borrowed from post-mortem records. The present tragedy of which we are spectators may in a double sense be called an historical drama, as it marks another one of man's failures brought about in the effort to apply his meager knowledge of the individual to regulate present politics by past history. One of the beneficent results of the application of modern biologic methods to the study of the mind has been the development of a sense of optimism based on the belief that the constantly growing interest in the study of living organisms is a foundation for the hope that human activities, as the laws governing their organization are more clearly revealed to us, may become subject to intelligent control.

Any rational attempt to become a nation more successful in cultivating peaceful arts than in developing a belligerent spirit predicates more thorough preparation than man has made to undertake the study and control of the mental mechanisms which give rise to obsessions, overvalued ideas, anomalous emotional reactions, jingoism and chauvinism. Never before has there been a greater necessity than the present one of extending our knowledge of the laws governing the activities of the mind. Temporary expedients for the preservation of the world's peace may be suggested by tribunals, senates and parliaments, but hope for the successful and peaceful solution of problems of vital importance to humanity depends primarily upon the success of man's efforts to attain a comprehensive knowledge of his own brain-power, and the methods by which this may be generated and controlled.

Among the signs of the times are evidences of a sentimental desire for peace, but on the other hand there are reasons for doubting whether our brain power is sufficient to attain and maintain conditions that are unfavorable for war. The enumeration of some of our national characteristics give rise to premonitions that in this crisis we shall with commendable promptitude and efficiency discharge our duties to sufferers abroad; and at the same time show an extraordinary disregard for the intelligent direction of many affairs at home. As a people we undoubtedly work best when under the strain of emotional excitement, and this tendency justifies great deliberateness in considering whether we are equal to the task requiring limitless stores of patience and an intelligence sufficiently developed to bring about conditions essential for the preservation of peace. In the interests of humanity it is desirable to distinguish very clearly between the logical thought-processes of intelligent, peace-loving people, and the sentiments of those who declaim against the horrors of war. There are certain innate qualities of the American mind which justify more than an occasional jog to our memories in order to recall the fact that intellectual judgments are largely determined by the character of the underlying emotional reactions; and yet without attempting to organize feeling or sentiment we complacently direct attention to our traditional capacity to look at the problems of life from a very practical point of view, and remain oblivious to the danger that exists in the constant repression of the sentimental side of our natures until some crisis increases the tension to such a degree that equilibrium can only be restored by an explosion.

We shall not be guilty of carrying our methods of introspection too far if we refer to the serious handicap to the cultivation of those qualities of mind which predispose toward the peaceable solution of im-

portant questions that is expressed in the national disregard for the biologic importance of good mental habits. We seldom stay at one task long enough to develop the habits essential for efficient and thorough work, and the same amateurishness characterizes our efforts whether they be in the field of diplomacy, road-building or in organizing a university. If we actually determine to lay substantial and rational foundations for peace, and not erect a temporary structure on the shifting sands of sentiment we should look below the surface for evidences of actual progress towards the realization of these aims; and find them expressed in such an undertaking as the endowment and organization of a great institute for the study of the brain and nervous system, in increased provisions made for research along similar lines in our universities, and in the establishment of departments of education with a view to training teachers to recognize the biologic needs of human beings; as well as in all those rational efforts made to extend or to put into practise our knowledge of the mechanisms by means of which human individuals adjust their lives successfully to the environment in which they live.

The folly of the mariner who goes to sea without a compass is not greater than our own in attempting to solve the problems involving the destiny of our race without any more definite knowledge than is yet possessed of the functions of the brain and nervous system. The optimistic views expressed by the eugenist in regard to the intellectual progress of the human race that will be brought about by selective breeding will be more rapidly realized as soon as we have collected sufficient data concerning the functions of the nervous system to determine what the desirable mental mechanisms are; as well as the nature of the factors conditioning the trends of the mental life. In reading history our attention is chiefly focused upon the behavior of large numbers of human beings, the crowd or mob, and we forget that the activities of the masses can not be interpreted intelligently until the reactions of the individual have been analyzed. History and anthropology can only become vital subjects and potent factors in directing the streams of civilization when interpreted by a more complete knowledge than we yet possess of the intricate mechanisms of the human brain. It is unnecessary to call attention to the fact that the accounts of man's interest in the investigation of hypothetical mental qualities are voluminous, whereas, the records of actual study of the minds of living persons are comparatively few and meager.

The progress made in the study of mental phenomena has been along two general lines. The different organs composing the human machine and their relations to each other have been made the subject of investigation, and in the second place by observation and by carefully gathering experience as to how the machine expresses its activities as a unit in behavior and conduct, a profitable and broad field of enquiry has been opened up. So dominated are many of us by the instinctive tendency to worship at a special shrine or bow down before a fetish that the absence of test-tube or induction coil in studying the problems of human conduct often leads to the supposition that the laws governing mental phenomena are less easily recognized than those conditioning the reactions taking place in a beaker or registered on a kymograph cylinder.

If we turn from trying to estimate the conjectural benefits that might follow the extension of knowledge of the brain to find some practical application for the relatively few facts already brought to light,

we shall be surprised that even this limited store of information has not been put to some practical use. Even in scientific laboratories by utilizing this information the conditions under which research is carried on could be greatly improved. Progress would be more rapid if scientific men estimated successful achievements not only by counting the number of new facts discovered by an investigator, but by measuring the dynamics of human nature and the character of the mental processes by which investigators attained their results. Occasionally the scientific atmosphere becomes so oppressive that we are justified in taking precautions so that anomalous emotional reactions, cynicism, moods of depression and exaltation, over-valued ideas, obsessions, paranoid trends of thought and the maniac's capacity for indulging in invective and controversy, as well as in depreciating the achievement of other persons, may be replaced by more desirable mental mechanism.

The importance of the early formation of desirable mental habits is a principle reiterated so often that it makes many moments unhappy ones during the copy-book age, but the practical application of the doctrine to increase our happiness and efficiency in living is almost ignored by the present educational system in America. A system of education based upon the vital principle that success in living should be measured by the ease with which the human machine works, and not by the amount of cargo stored in the hold, would be of incalculable benefit to our race.

No more effective demonstration that science is common sense at its best is needed than the justification derived from the modern methods of studying mental phenomena of making habit-formation the chief function of elementary teaching, and from this procedure follows a natural and not arbitrary division between school and university; the former would then be recognized as the place in which habit-mechanisms are carefully trained, and the latter a field for trying out under supervision the activities essential for independent thinking, and for offering encouragement to competent persons to contribute to the extension of human knowledge.

If the citizens of this country are animated by a sincere desire to maintain a condition of peace expressing the activities of virile manhood and not the idle dreams of those who are unable to protect themselves against aggression, a well-directed effort should be made to assist those potentially capable of intellectual leadership to develop their mental faculties to the maximum of efficiency. Although leaders of thought may now be classed as among the actual necessities of life, the atmosphere of the American university is distinctly favorable for the growth of dilettantism and mediocrity. These institutions suddenly find themselves called upon to do their share in bringing about a readjustment of civilization hampered by an organization continually modified to meet either the demands of alumni, who for purely sentimental reasons are disinclined to aid actively in carrying out the proposed transformation of college into university or the increasing number of protestations coming from the champions of a hysterical athleticism. The measure of our intelligence as well as capacity to control effusive sentimentalism may be readily gauged by the methods we adopt in attempting to transform the universities into centers from which a spirit of intellectual leadership may be disseminated.

One result of "the splendid isolation" of our universities from each other has been that a chain of fictitious values for both ideas and ideals is established that empha-

sizes to an excessive degree the importance of a single institution and fails to bring home to students the desirability of developing emotional reactions in connection with permanent motives. At an impressionable age the emotional life of college students is sharply focused upon the interests of a single institution and the general drift of the affective undercurrents is so rigidly determined as to make it exceedingly difficult for the individual later in life to cultivate a just sense of discrimination. The dynamic power of constructive imagination depends upon the organization of an individual's activities, so that there should be coordination of feeling, sentiment and volitional response; and it is just this principle upon which so much of the effectiveness of our intellectual efforts depends that is practically not represented in the organization of our universities; and the failure to make this provision often deprives this country of the fruits of the highest forms of intellectual activity.

Mental habits once established, and motives called into play can not as a rule be shifted later in life without seriously restricting the intellectual horizon by the forcible readjustment of the emotional balance; an adaptation which is none the less serious because the individual is not aware of the process. As long as universities are controlled largely by their own alumni and by boards of trustees representing the traditions, beliefs and parochialisms of a single institution it is hardly possible that these institutions will become centers in which the type of personality essential for creative effort in science, art, or literature will receive a hearty welcome or attain full citizenship. The influence of the continental university is often unfortunately restricted by racial prejudice and national boundaries, but the American university is pretty generally hemmed in by the much narrower parochialism of its own alumni.

May we not begin to let a little more oxygen into the university atmosphere so that the energy, enthusiasm and idealism of American life which is already being put to a world test may be wisely directed and not repressed or stifled. Harvard's Back Bay traditions, Yale's fixed belief in the value of New Haven's ideals, Columbia's complacent metropolitanism, Princeton's faith in imported culture, and Pennsylvania's homing instincts all mark commendable mental traits that have served a useful purpose; and probably these qualities would once again become active ferments if they were transferred to new media.

The following plan if carried into execution would probably tend to bring about conditions more favorable than those now existing for the liberation of the energy stored up within our universities, and which is so often wasted without any effort made to convert it into a creative force.

If each university tried the simple experiment of appointing a small number of consulting trustees, members of the faculty of rival institutions, to meet once or twice a year with the home-board they would bring into the discussion of academic problems that sense of perspective and of values which is now so feebly represented; and definite progress would also be made in preparing intelligently both to maintain peace and deserve respect. This change would be the equivalent of a public declaration of intentions to the effect that the universities were prepared to abandon their local traditions and prejudices, to substitute for particularism a sense of nationalism or even a broad world-spirit, and thus they would become more intimately identified with the intellectual life and spirit of our civilization; and then in good time, following the growth of these broader

interests, more intelligent sympathy and active support would be accorded to those who are endeavoring to extend the bounds of knowledge.

In the present world-crisis we are oppressed by the feeling that the old conceptions of truth have failed us, but our despondency is lessened by the realization of the progress which the efforts of investigators must bring when they are heartily approved, sustained and strengthened by universities fully awakened to the necessity for intellectual leadership in the development of the newer civilization.

STEWART PATON

JOHN MUIR

ON the day before Christmas John Muir, geologist, explorer, naturalist, author, joined the great majority. Though seventy-six years old there had been no apparent decay of his remarkable faculties. Nor was there any painful waiting for the end. Death found him almost in the midst of his literary activities, which he had laid aside for a brief interval in order that he might spend the Christmas holidays with one of his daughters in southern California. On the 27th of December a large concourse of friends gathered from near and far at his home near Martinez, California, to hear the last rites spoken over his remains. He was buried, beside his wife, under trees planted by his own hand, in the beautiful family burial-ground among the Alhambra hills.

John Muir was born at Dunbar, Scotland, April 21, 1838. He was the third in a family of seven children. His early education was received at the grammar school in Dunbar. When he was eleven years old his father emigrated with his family to the United States. They settled on a farm near Portage, Wisconsin. There he indulged to the full his fondness for the life of the wilderness. His book entitled "The Story of My Boyhood and Youth" gives a pleasing picture of this period of his life. He also developed an extraordinary aptness for mechanical inventions of various kinds. Some of these are described in the same volume. In due time he went to the University of Wisconsin. His university career is best described in his own words: "Although I was four years at the university," he wrote two years ago, "I did not take the regular course of studies, but instead picked out what I thought would be most useful to me, particularly chemistry, which opened a new world, and mathematics and physics, a little Greek and Latin, botany and geology. I was far from satisfied with what I had learned, and should have stayed longer. Anyhow I wandered away on a glorious botanical and geological excursion, which has lasted nearly fifty years and is not yet completed, always happy and free, poor and rich, without thought of diploma or of making a name, urged on and on through endless inspiring, Godful beauty."

It was in the early sixties that Muir started off on those wanderings that finally brought him to California. In the early seventies his first brief communications on Yosemite and the Sierra Nevada began to appear in San Francisco and eastern papers. Soon his articles began to be published in the *Overland Monthly, Harper's, Scribner's,* the *Century,* and the *Atlantic.* A *Reference List to the published writings of John Muir,* prepared by Professor Cornelius B. Bradley in 1897, contains the dates and titles of nearly one hundred and fifty such articles and communications. At that time he had published only one book, "The Mountains of California," which appeared in 1894. But in "Picturesque California," edited by him in 1888, he had contributed articles on "Peaks and Glaciers of the Sierra," "The Passes of the High Sierra," "Yosemite Valley," "Mt. Shasta," "Washington and Puget Sound," and "The Basin of the Columbia River." In the *Proceedings of the American Association for the Advancement of Science* he was represented by papers on "The Formation of Mountains in the Sierra" (Vol. XXIII.), and "The Post-glacial History of the *Sequoia Gigantea*" (Vol. XXV.).

It seems remarkable now that a man of such